CLAIMS

1. An information processing apparatus comprising:

an information storage device in which a loading/ejection mechanism for a removable medium is operated according to a change in a depressed state of a switch;

a control device which records data on the removable medium and/or reads out data from the removable medium by controlling the information storage device;

a power supply device capable of performing and stopping power supply to the information storage device and to the control device;

a continuous power supply device capable of supplying power when power supply by the power supply device is stopped; and

a power supply controller which operates by being supplied with power from the continuous power supply device, and which, when the depressed state of the switch is changed during stoppage of power supply from the power supply device to the information storage device, controls the information storage device so that the removable medium loading/ejection mechanism is operated, by controlling the power supply device so that the power supply device supplies power to the information storage device or to the information storage device and the control device.

2. The information processing apparatus according to claim 1, wherein the power supply controller performs such control that in the case of ejecting the removable medium by controlling the information storage device so that the loading/ejection mechanism is operated, the power supply controller stops power supply from the power supply device after the completion of the ejection operation, and

that, in the case of loading the removable medium by controlling the information storage device so that the loading/ejection mechanism is operated, the power supply

controller does not stop power supply from the power supply device even after the completion of the loading operation.

3. The information processing apparatus according to claim 2, wherein the power supply controller performs such control that when the removable medium is ejected upon the change in the depressed state of the switch during stoppage of power supply to the information storage device, the power supply controller controls the power supply device to supply power to the information storage device,

that, when the removable medium is loaded upon the change in the depressed state of the switch during stoppage of power supply to the information storage device, the power supply controller controls the power supply device to supply power to the information storage device and to the control device,

that, in the case of ejecting the removable medium, the power supply controller controls the power supply device to stop power supply to the information storage device after the completion of the ejection operation, and

that, in the case of loading the removable medium, the power supply controller does not stop power supply from the power supply device even after the completion of the loading operation.

4. An information processing apparatus comprising:

an information storage device in which a loading/ejection mechanism for a removable medium is operated according to a change in a depressed state of a switch;

a control device which records data on the removable medium and/or reads out data from the removable medium by controlling the information storage device;

a power supply device capable of performing and stopping power supply to the information storage device and to the control device;

a continuous power supply device capable of supplying power when power supply by the power supply device is stopped;

a power switch with which power supply to the power supply device is started and stopped, and with which, at the time of starting power supply, the control device is started up in a normal startup mode in which general-purpose processing can be performed by a user program executed on an OS; and

a power supply controller which operates by being supplied with power from the continuous power supply device, and which, when the depressed state of a switch provided on an outer portion or an inner portion of the information storage device is changed during stoppage of power supply from the power supply device to the information storage device, controls the power supply device so that the power supply device supplies power to the information storage device or to the information storage device and the control device, thereafter starts up the control device in an instant startup mode for reproducing or processing data in a predetermined format recorded on the removable medium, and controls the information storage device so that the removable medium loading/ejection mechanism is operated according to the change in the depressed state of the switch.

5. The information processing apparatus according to claim 4, wherein the power supply controller performs such control that in the case of ejecting the removable medium by controlling the information storage device so that the loading/ejection mechanism is operated, at the time of startup in the instant startup mode, the power supply controller stops power supply from the power supply device after the completion of the ejection operation,

that, if the removable medium does not exist in the information storage device, the power supply controller stops power supply from the power supply device, and

that, in the case of loading the removable medium by controlling the information storage device so that the loading/ejection mechanism is operated, the power supply controller does not stop power supply from the power supply device even after the completion of the loading operation.

6. The information processing apparatus according to claim 4, wherein the control device performs such control as to identify the kind of data on the removable medium at the time of startup in the instant startup mode, perform reproduction or processing of the data if the data is recorded in a predetermined format, and stop power supply by controlling the power supply device if no data is recorded in the predetermined format.

7. The information processing apparatus according to claim 4, wherein the control device performs such control as to identify the kind of data on the removable medium at the time of startup in the instant startup mode, perform reproduction or processing of the data if the data is recorded in a predetermined format, and restart in the normal mode if no data is recorded in the predetermined format.

8. The information processing apparatus according to any one of claims 4 to 7, wherein the data in the predetermined format is data compliant with a moving picture/audio data standard such as DVD-Video, Video CD and CD Audio.

9. The information processing apparatus according to claim 1 or 4, wherein the loading/ejection mechanism for the removable medium ejects the removable medium when operated by depressing a first switch provided on an outer portion of the information storage device, and

wherein the loading/ejection mechanism for the removable medium loads the removable medium when operated by changing a depressed state of a second switch provided on an inner portion of the information storage device by insertion of the removable medium, whereby readout of data from the removable medium and/or recording of data on the removable medium is enabled.

10. The information processing apparatus according to claim 9, further comprising a logic holding device which holds the logical state of the first switch when depression of the first switch is detected during stoppage of power supply from the power supply device to the information storage device, and

which cancels the held logical state when the loading/ejection mechanism for the removable medium is operated to load or eject the removable medium, wherein the loading/ejection mechanism for the removable medium performs the loading or ejection operation according to an output from the logic holding device and the logic of the second switch.

11. The information processing apparatus according to claim 9, wherein the power supply controller controls the power supply device so that if the second switch is set in the original state as result of the change in the depressed state of the second switch when power is supplied to the information storage device according to the change in the depressed state of the second switch, the power supply device stops supplying power to the information storage device or to the information storage device and the control device to which power has been supplied, without operating the loading/ejection mechanism for the removable medium.

12. The information processing apparatus according to claim 1 or 4, wherein the loading/ejection mechanism for the removable medium is a removable medium transport device for transporting the removable medium into the information storage device while holding the removable medium,

wherein a third switch is provided on an outer portion of the information storage device for the purpose of operating the removable medium transport device, and a fourth switch is provided on an inner portion of the information storage device to detect an ejecting state of the removable medium transport device,

wherein the removable medium loading operation is performed when the third switch is depressed while the removable medium transport device is in the state of ejecting the removable medium, or when a depressed state of the fourth switch is changed, and

wherein the removable medium ejecting operation is performed when the fourth switch is depressed while the

removable medium transport device is not in the state of ejecting the removable medium.

13. The information processing apparatus according to claim 12, further comprising a logic holding device which, when depression of the third switch is detected during stoppage of power supply from the power supply device to the information storage device, holds the logical state of the third switch depressed, and which cancels the held logical state after the removable medium transport device has been operated,

wherein the removable medium transport device performs the loading or ejection operation according to an output from the logic holding device and the logic of the fourth switch.

14. The information processing apparatus according to claim 12, wherein the power supply controller controls the power supply device so that if, when the removable medium transport device performs the loading operation while power is being supplied to the information storage device, the absence of the removable medium in the information storage device is detected after the completion of the loading operation, the power supply device stops supplying power to the information storage device or to the information storage device and the control device to which power has been supplied.

15. The information processing apparatus according to claim 1 or 4, wherein the loading/ejection mechanism for the removable medium is a removable medium holding device for holding the removable medium,

wherein a fifth switch is provided on an outer portion of the information storage device for the purpose of operating the removable medium holding device, and a sixth switch is provided on an inner portion of the information storage device to detect a locked state of the removable medium holding device inside the information storage device,

wherein if the locked state of the removable medium holding device is detected by the sixth switch when the fifth switch is depressed, an operation to expel the removable medium holding

device out of the information storage device by releasing the removable medium holding device from the locked state is performed, and

wherein an operation to enable readout of data from the removable medium and/or recording of data on the removable medium is performed when the change in state of the removable medium holding device from the non-locked state to the locked state is detected by the sixth switch.

16. The information processing apparatus according to claim 15, further comprising a logic holding device which, when depression of the fifth switch is detected during stoppage of power supply from the power supply device to the information storage device, holds the logical state of the fifth switch depressed, and which cancels the held logical state after the removable medium holding device has been released from the locked state.

17. The information processing apparatus according to claim 15, wherein if the absence of the removable medium in the information storage device is detected when the fifth switch is in a state of being released from the depressed state and when the locked state of the removable medium holding device in the information storage device is detected by the sixth switch while power is being supplied to the information storage device, the power supply controller stops power supply to the information storage device or to the information storage device and the control device to which power is being supplied.

18. A power supply control method for an information processing apparatus having an information storage device in which a loading/ejection mechanism for a removable medium is operated according to a change in a depressed state of a switch;

a control device which records data on the removable medium and/or reads out data from the removable medium by controlling the information storage device;

a power supply device capable of performing and stopping power supply to the information storage device and to the control device; and

a continuous power supply device capable of supplying power when power supply by the power supply device is stopped, the method comprising, when the depressed state of the switch is changed during stoppage of power supply from the power supply device to the information storage device, controlling the information storage device so that the removable medium loading/ejection mechanism is operated, by controlling, by means of a power supply controller which operates by being supplied with power from the continuous power supply device, the power supply device so that the power supply device supplies power to the information storage device or to the information storage device and the control device.

19. The power supply control method for the information processing apparatus according to claim 18, wherein the power supply controller performs such control that in the case of ejecting the removable medium by controlling the information storage device so that the loading/ejection mechanism is operated, the power supply controller stops power supply from the power supply device after the completion of the ejection operation, and

that, in the case of loading the removable medium by controlling the information storage device so that the loading/ejection mechanism is operated, the power supply controller does not stop power supply from the power supply device even after the completion of the loading operation.

20. The power supply control method for the information processing apparatus according to claim 19, wherein the power supply controller performs such control that when the removable medium is ejected upon the change in the depressed state of the switch during stoppage of power supply to the information storage device, the power supply controller controls the power supply device to supply power to the information storage device,

that, when the removable medium is loaded upon the change in the depressed state of the switch during stoppage of power supply to the information storage device, the power supply controller controls the power supply device to supply power to the information storage device and to the control device,

that, in the case of ejecting the removable medium, the power supply controller controls the power supply device to stop power supply to the information storage device after the completion of the ejection operation, and

that, in the case of loading the removable medium, the power supply controller does not stop power supply from the power supply device even after the completion of loading.

21. A power supply control method for an information processing apparatus having an information storage device in which a loading/ejection mechanism for a removable medium is operated according to a change in a depressed state of a switch;

a control device which records data on the removable medium and/or reads out data from the removable medium by controlling the information storage device;

a power supply device capable of performing and stopping power supply to the information storage device and to the control device;

a power switch with which start-stop control of power supply by the power supply device is performed;

a continuous power supply device capable of supplying power when power supply by the power supply device is stopped; and

a power supply controller which operates by being supplied with power from the continuous power supply device, the method comprising:

in the case of staring power supply from the power supply device by control with the power switch, starting up the control device in a normal startup mode in which general-purpose processing can be performed by a user program executed on an OS;

when the depressed state of the switch is changed during stoppage of power supply from the power supply device to the information storage device, controlling by the power supply controller the power supply device so that the power supply device supplies power to the information storage device or to the information storage device and the control device, and starting up the control device in an instant startup mode for reproducing or processing data in a predetermined format recorded on the removable medium; and

controlling the information storage device under a command from the power supply controller so that the removable medium loading/ejection mechanism is operated according to the depressed state of the switch.

22. The power supply control method for the information processing apparatus according to claim 21, wherein the power supply controller performs such control that in the case of ejecting the removable medium by controlling the information storage device so that the loading/ejection mechanism is operated, at the time of startup in the instant startup mode, the power supply controller stops power supply from the power supply device after the completion of the ejection operation,

that, if the removable medium does not exist in the information storage device, the power supply controller stops power supply from the power supply device, and

that, in the case of loading the removable medium by controlling the information storage device so that the loading/ejection mechanism is operated, the power supply controller continues power supply from the power supply device even after the completion of the loading operation.

23. The power supply control method for the information processing apparatus according to claim 21, wherein the control device controls the information storage device to identify the kind of data on the removable medium at the time of startup in the instant startup mode, perform reproduction or processing of the data if the data is recorded in a predetermined format,

and stop power supply by controlling the power supply device if no data is recorded in the predetermined format.

24. The power supply control method for the information processing apparatus according to claim 21, wherein the control device controls the information storage device to identify the kind of data on the removable medium at the time of startup in the instant startup mode, perform reproduction or processing of the data if the data is recorded in a predetermined format, and restart in the normal mode if no data is recorded in the predetermined format.

25. The power supply control method for the information processing apparatus according to any one of claims 21 to 24, wherein the data in the predetermined format is data compliant with a moving picture/audio data standard such as DVD-Video, Video CD and CD Audio.

26. The power supply control method for the information processing apparatus according to claim 18 or 21, wherein

the loading/ejection mechanism for the removable medium ejects the removable medium when operated by depressing a first switch provided on an outer portion of the information storage device, and

the loading/ejection mechanism for the removable medium loads the removable medium when operated by changing a depressed state of a second switch provided on an inner portion of the information storage device by insertion of the removable medium.

27. The power supply control method for the information processing apparatus according to claim 26, wherein

a logical state of the first switch is held when depression of the first switch is detected during stoppage of power supply from the power supply device to the information storage device, and the held logical state is canceled when the loading/ejection mechanism for the removable medium is operated to load or eject the removable medium, and

the loading/ejection mechanism for the removable medium is made to perform the loading or ejection operation according to the logical state and the logic of the second switch.

28. The power supply control method for the information processing apparatus according to claim 26, wherein the power supply controller controls the power supply device so that when the second switch is set in the original state as a result of the change in the depressed state of the second switch when power is supplied to the information storage device according to the change in the depressed state of the second switch, the power supply device stops supplying power to the information storage device or to the information storage device and the control device to which power has been supplied, without operating the loading/ejection mechanism for the removable medium.

29. The power supply control method for the information processing apparatus according to claim 18 or 21, wherein

a removable medium transport device for transporting the removable medium into the information storage device while holding the removable medium is used as the loading/ejection mechanism for the removable medium,

a third switch provided on an outer portion of the information storage device for the purpose of operating the removable medium transport device and a fourth switch provided on an inner portion of the information storage device to detect an ejecting state of the removable medium transport device are used,

the removable medium loading operation is performed when the third switch is depressed while the removable medium transport device is in the state of ejecting the removable medium, or when a depressed state of the fourth switch is changed, and

the removable medium ejecting operation is performed when the fourth switch is depressed while the removable medium

transport device is not in the state of ejecting the removable medium.

30. The power supply control method for the information processing apparatus according to claim 29, wherein

when depression of a third switch is detected during stoppage of power supply from the power supply device to the information storage device, the logical state of the third switch depressed is held, and

the held logical state is canceled after the removable medium transport device has been operated.

31. The power supply control method for the information processing apparatus according to claim 29, wherein the power supply controller controls the power supply device so that in case where the removable medium transport device performs the loading operation while power is being supplied to the information storage device, when the absence of the removable medium in the information storage device is detected after the completion of the loading operation, the power supply device stops supplying power to the information storage device or to the information storage device and the control device to which power has been supplied.

32. The power supply control method for the information processing apparatus according to claim 18 or 21, wherein

a removable medium holding device for holding the removable medium is used as the loading/ejection mechanism for the removable medium,

a fifth switch provided on an outer portion of the information storage device for the purpose of operating the removable medium holding device and a sixth switch provided on an inner portion of the information storage device to detect a locked state of the removable medium holding device inside the information storage device are used,

in case where the locked state of the removable medium holding device is detected by the sixth switch when the fifth switch is depressed, the removable medium holding device is

expelled out of the information storage device by releasing the removable medium holding device from the locked state, and

readout of data from the removable medium and/or recording of data on the removable medium is enabled when the change in state of the removable medium holding device from the non-locked state to the locked state is detected by the sixth switch.

33. The power supply control method for the information processing apparatus according to claim 32, wherein

when depression of a fifth switch is detected during stoppage of power supply from the power supply device to the information storage device, the logical state of the fifth switch depressed is held, and

the held logical state is cancelled after the removable medium holding device has been released from the locked state.

34. The power supply control method for the information processing apparatus according to claim 32, wherein in case where the absence of the removable medium in the information storage device is detected when the locked state of the removable medium holding device in the information storage device is detected by the sixth switch while power is being supplied to the information storage device, the power supply controller stops power supply to the information storage device or to the information storage device and the control device to which power is being supplied.

35. An information storage device in which a loading/ejection mechanism for a removable medium is operated according to a change in a depressed state of a switch, wherein

the information storage device is controlled by a control device so as to record data on the removable medium and/or read out data from the removable medium,

the information storage device is connected to a power supply device capable of performing and stopping power supply to the information storage device and to the control device,

the information storage device comprises a power supply controller which operates by being supplied with power from a continuous power supply device capable of supplying power when power supply by the power supply device is stopped, and which, when the depressed state of the switch is changed during stoppage of power supply from the power supply device to the information storage device, controls the information storage device so that the removable medium loading/ejection mechanism is operated, by controlling the power supply device so that the power supply device supplies power to the information storage device or to the information storage device and the control device.

36. The information storage device according to claim 35, wherein the power supply controller performs such control that in the case of ejecting the removable medium by controlling the information storage device so that the loading/ejection mechanism is operated, the power supply controller stops power supply from the power supply device after the completion of the ejection operation, and

that, in the case of loading the removable medium by controlling the information storage device so that the loading/ejection mechanism is operated, the power supply controller does not stop power supply from the power supply device even after the completion of the loading operation.

37. The information storage device according to claim 36, wherein the power supply controller performs such control that

when the removable medium is ejected upon the change in the depressed state of the switch during stoppage of power supply to the information storage device, the power supply controller controls the power supply device to supply power to the information storage device,

when the removable medium is loaded upon the change in the depressed state of the switch during stoppage of power supply to the information storage device, the power supply

controller controls the power supply device to supply power to the information storage device and to the control device,

when the removable medium is ejected, the power supply controller controls the power supply device to stop power supply to the information storage device after the completion of the ejection operation, and

when the removable medium is loaded, the power supply controller does not stop power supply from the power supply device even after the completion of the loading operation.

38. An information storage device in which a loading/ejection mechanism for a removable medium is operated according to a change in a depressed state of a switch, comprising:

a control device for controlling the information storage device so as to record data on the removable medium and/or read out data from the removable medium,

a power supply device connected to the information storage device and being capable of performing and stopping power supply to the information storage device and to the control device, and

a power switch for starting and stopping power supply by the power supply device,

the power switch starting up the control device in a normal startup mode in which general-purpose processing can be performed by a user program executed on an OS upon start of power supply, wherein

the information storage device further comprises a power supply controller which operates by being supplied with power from a continuous power supply device capable of supplying power even when power supply by the power supply device is stopped, and which, when the depressed state of a switch provided on an outer portion or an inner portion of the information storage device is changed during stoppage of power supply from the power supply device to the information storage device, controls the power supply device so that the power supply device supplies power to the information storage device or to the

information storage device and the control device, thereafter starts up the control device in an instant startup mode for reproducing or processing data in a predetermined format recorded on the removable medium, and controls the information storage device so that the removable medium loading/ejection mechanism is operated according to the change in the depressed state of the switch.

39. The information storage device according to claim 38, wherein the power supply controller performs such control, at the time of startup in the instant startup mode, that

when the removable medium is ejected by controlling the information storage device so that the loading/ejection mechanism is operated, the power supply controller stops power supply from the power supply device after the completion of the ejection operation,

when the removable medium does not exist in the information storage device, the power supply controller stops power supply from the power supply device, and

when the removable medium is loaded by controlling the information storage device so that the loading/ejection mechanism is operated, the power supply controller does not stop power supply from the power supply device even after the completion of the loading operation.

40. The information storage device according to claim 38, wherein the power supply controller performs such control as to identify the kind of data on the removable medium at the time of startup in the instant startup mode, to perform reproduction or processing of the data when the data is recorded in a predetermined format, and to stop power supply by controlling the power supply device when no data is recorded in the predetermined format.

41. The information storage device according to claim 38, wherein the power supply controller performs such control as to identify the kind of data on the removable medium at the time of startup in the instant startup mode, to perform

reproduction or processing of the data when the data is recorded in a predetermined format, and to restart in the normal startup mode when no data is recorded in the predetermined format.

42. The information storage device according to any one of claims 38 to 41, wherein the data in the predetermined format is data compliant with a moving picture/audio data standard such as DVD-Video, Video CD and CD Audio.

43. The information storage device according to claim 35, wherein

the loading/ejection mechanism for the removable medium ejects the removable medium when operated by depressing a first switch provided on an outer portion of the information storage device, and

the loading/ejection mechanism for the removable medium loads the removable medium when operated by changing a depressed state of a second switch provided on an inner portion of the information storage device by insertion of the removable medium, whereby readout of data from the removable medium and/or recording of data on the removable medium is enabled.

44. The information storage device according to claim 43, further comprising a logic holding device which holds the logical state of the first switch when depression of the first switch is detected during stoppage of power supply from the power supply device to the information storage device, and which cancels the held logical state when the loading/ejection mechanism for the removable medium is operated to load or eject the removable medium, wherein the loading/ejection mechanism for the removable medium performs the loading or ejection operation according to an output from the logic holding device and the logic of the second switch.

45. The information storage device according to claim 43, wherein the power supply controller controls the power supply device so that when the second switch is set in the original state as a result of the change in the depressed state of the second switch when power is supplied to the information storage

device according to the change in the depressed state of the second switch, the power supply device stops supplying power to the information storage device or to the information storage device and the control device to which power has been supplied, without operating the loading/ejection mechanism for the removable medium.

46. The information storage device according to any one of claims 35 to 42, wherein

the loading/ejection mechanism for the removable medium is a removable medium transport device for transporting the removable medium into the information storage device while holding the removable medium,

a third switch is provided on an outer portion of the information storage device for the purpose of operating the removable medium transport device, and a fourth switch is provided on an inner portion of the information storage device to detect an ejecting state of the removable medium transport device,

the removable medium loading operation is performed when the third switch is depressed while the removable medium transport device is in the state of ejecting the removable medium, or when a depressed state of the fourth switch is changed, and

the removable medium ejecting operation is performed when the fourth switch is depressed while the removable medium transport device is not in the state of ejecting the removable medium.

47. The information storage device according to claim 46, further comprising a logic holding device which, when depression of the third switch is detected during stoppage of power supply from the power supply device to the information storage device, holds the logical state of the third switch depressed, and which cancels the held logical state after the removable medium transport device has been operated, wherein the removable medium transport device performs the loading

or ejection operation according to an output from the logic holding device and the logic of the fourth switch.

48. The information storage device according to claim 46, wherein the power supply controller controls the power supply device so that in case where the removable medium transport device performs the loading operation while power is being supplied to the information storage device, when the absence of the removable medium in the information storage device is detected after the completion of the loading operation, the power supply device stops supplying power to the information storage device or to the information storage device and the control device to which power has been supplied.

49. The information storage device according to any one of claims 35 to 42, wherein

the loading/ejection mechanism for the removable medium is a removable medium holding device for holding the removable medium,

a fifth switch is provided on an outer portion of the information storage device for the purpose of operating the removable medium holding device, and a sixth switch is provided on an inner portion of the information storage device to detect a locked state of the removable medium holding device inside the information storage device,

in case where the locked state of the removable medium holding device is detected by the sixth switch when the fifth switch is depressed, an operation is performed to expel the removable medium holding device out of the information storage device by releasing the removable medium holding device from the locked state, and

an operation is performed to enable readout of data from the removable medium and/or recording of data on the removable medium when the change in state of the removable medium holding device from the non-locked state to the locked state is detected by the sixth switch.

50. The information storage device according to claim 49, further comprising a logic holding device which, when depression of the fifth switch is detected during stoppage of power supply from the power supply device to the information storage device, holds the logical state of the fifth switch depressed, and which cancels the held logical state after the removable medium holding device has been released from the locked state.

51. The information storage device according to claim 49, wherein, in case where the absence of the removable medium in the information storage device is detected when the fifth switch is in a state of being released from the depressed state and when the locked state of the removable medium holding device in the information storage device is detected by the sixth switch while power is being supplied to the information storage device, the power supply controller stops power supply to the information storage device or to the information storage device and the control device to which power is being supplied.